|  |  |
| --- | --- |
| Paper Information | |
| Paper number | Paper number from ConfTool (Note: add “1” in front of the synopsis number; e.g. synopsis #150 becomes paper #1150) |
| Paper title | Title as used in the synopsis |
| Study Committee | Choose an item. |
| Preferential subject | Choose an item. |
| Authors | Enter names of the authors, separated by a comma |
| Affiliations (optional) | Enter affiliations of authors, with reference numbers if required. |
| Country | Enter country of main author |
| Email address | Enter the email address of the submitting or presenting author |

|  |
| --- |
| Summary |
| Enter the paper summary here.  Text must be in one Column, Font Times New Roman size 12 and Line Spacing 1.15. Use “Justified” paragraph alignment.  The summary should provide a thorough overview of the content of the paper to assist the readers. It should include the background and goal of the paper, the main methods used and present the main results. It should be maximum **500 words** and no more than **one page**. |
| Keywords |
| Enter keywords, separated by commas, in alphabetical order. See Appendix B for instructions. |

# Introduction

Start the main text here on a new page.

# Heading-1

Start the main text here.

## Heading-2

Start the main text here. Refer to Bibliography with the following numbering [1].

Refer to each Figure in the text before the Figure is presented in the paper. Figures are centralized.

A green sign with white text

Description automatically generated

Figure 1 - Explain the Figure in figure text

### Heading-3

# Heading-1

## Heading-2

Start the main text here.

List:

* Item 1.
  + Sub-level
* Item 2.
  + Sub-level

Refer to each Table in the text before the Table is presented in the paper. Tables are centralized.

Table 1 - Explain the Table in table text

|  |  |  |  |  |  |  |
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| text | text |  |  |  |  |  |
| Text | … |  |  |  |  |  |
| text | … |  |  |  |  |  |

Equations must be numbered, as illustrated below:

|  |  |
| --- | --- |
|  | (1) |

Bibliography

Start bibliography after the last section (or on a new page).

1. Reference 1
2. Reference 2
3. Etcetera …

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# Appendix A

# General instructions

This document gives instructions for writing the full paper for the CIGRE NRCC 2025 symposium in Trondheim. The organizing committee provides templates for synopses and papers on the CIGRE NRCC 2025 symposium in Trondheim webpage (<https://cigrenrccsymposium2025.com/> ). The timeline for the synopses and papers can be found in the Call for Papers. Possible changes will be updated on the webpage for the CIGRE NRCC 2025 symposium in Trondheim.

## Nature of papers

Papers presented at CIGRE Sessions and Symposia must be unpublished and the contents strictly scientific or technical. No advertising is allowed and commercial names, such as manufacturer product names or commercial software are not allowed in the text, figures or tables. The names of companies, research institutes or universities can appear only in the affiliations of the authors.

## Language

Symposium papers must be in English. Decide if you use British English, American English or some other version and be consistent.

## Paper length

The recommended maximum length for papers is **10 pages**, including title, figures and Bibliography. Acceptance of papers over this length will be at the discretion of the Study Committee Chair.

## File name, size and format.

The paper must be uploaded to ConfTool in pdf format. The size of the pdf file must not exceed **10 megabyte** **(10 MB)**

The name of the file should follow this convention:

**Paper number\_SC\_PSX\_Author family name\_Country**

Where:

* Paper number: is the ConfTool paper number (i.e. synopsis number preceded by “1”),
* SC is the Study Committee the paper has been assigned to (e.g. A3)
* X is 1 or 2,
* Country is two-letter country code (e.g. AU for Australia).

Example: 1245\_C4\_PS1\_OLSEN\_NO

# Structure of papers

The papers should have a standardised format, explained below. Use the Word styles as much as possible.

## Paper information

Use the heading in the table on the first page of the template. This should not be altered. The author must populate the second column of the table with the following information:

* ConfTool paper number –The number given with the acceptance of the synopsis preceded by “1”.
* Paper title – The title of the paper as used in the synopsis
* Study Committee – The study committee (Select from drop-down menu in the template)
* Preferential Subject – PS1 or PS2 (Select from drop-down menu in the template)
* Authors – Author names in the following way: family or last name fully capitalised and given names should have an initial capital.
* Affiliations – The affiliations of authors are optional. When a paper has several authors with different affiliations, a number should be inserted after each author with a corresponding number before each affiliation organisation.
* Country – Country of the main author.
* Email address – email address of the main author.

## Paper summary

The paper summary should provide a thorough overview of the content of the paper to assist the readers. It should include the background and goal of the paper, the main methods used and present the main results. It should be **maximum 500 words and one page**.

## Keywords

A short list of keywords for classification purposes should follow the summary. These should be specific and clear. More details about suitable keywords can be found in Appendix B.

## The main text of paper

The main contents of the text should start a new page and include chapter numbering, please see template on page 2 of this document.

The main text must be in one Column, Font Times New Roman size 12 and Line Spacing 1.15.

The main headings must use the styles embedded in this template:

* 1 Heading 1: Font Times New Roman size 14
* 1.1 Heading 2: Font Times New Roman size 12
* 1.1.1 Heading 3: Font Times New Roman size 12

## Figures and tables

Refer to each figure and table in the text before the table is presented in the paper. Figures and tables are centralized.

Figures and tables should be numbered. Figure numbers and captions should appear under each figure and be centralized. Table numbers and captions should appear above each table and be centralized.

Figures should be readable and include appropriate references if they are sourced from elsewhere. The authors are responsible to ensure that they have the right permissions to publish their figures and diagrams.

Figures and tables should be self-explanatory. The title, axes, parameters, abbreviations, etc., should all be in the figure or in the figure text. All comments relevant to the figures should appear in the caption. Typing characters must be carefully selected to ensure legibility.

Use good quality figures with sufficient resolution while keeping the size of the full paper pdf file below 10 MB.

Typing characters for tables should be chosen such as to be clearly legible and no smaller than 10pt.

## Equations, symbols and units

Authors are asked to use the decimal metric system referred to as International System SI (explained in IEC publication No 60027 Technical international standards for letter symbols in 6 parts).

Authors should avoid giving mathematical developments. If these are necessary, they should be in an appendix.

Equations should be numbered. Write equations with equation editor. Equations are in the same role as words in the text and they should appear logically.

Define the symbols in your equation before the equation appears or immediately following or in a separate list of symbols. You can separate similar symbols for example with subscripts. Use symbols, not words or abbreviations in the equations. Use italic for variables and only for variables. Constants such as j for imaginary unit and some subscripts, are not italicized.

Appendix C gives recommendations for symbols and abbreviations.

## Bibliography

References should follow the [Vancouver style](https://guides.library.uq.edu.au/referencing/vancouver/reference-list#:~:text=A%20bibliography%20is%20a%20separate,were%20used%20for%20background%20reading.) and should be mentioned following the order in which they appear in the text. Authors should not refer to unpublished documents, e.g. company internal documents.

In the reference list, each reference should have the following minimum information:

* Names of authors and the year of publication.
* For conference and journal papers: Title of the article and the name the publication or conference in italics, reference number, date, DOI or URL if available
* For books: The book title in italics, editor, publisher.

## Page layout

The layout should be ISO 210x297mm / DIN A4-format.

The text should be divided under headings and subheadings.

# Copyright

The papers are copyrighted to protect the interest of CIGRE as well as their authors. Authors who submit a paper for publication agree to assign the copyright in the paper, in accordance with the “copyright provisions”, see Appendix D.

# Submitting papers

Authors should upload the papers to ConfTool (<https://www.conftool.pro/cigrenrccsymposium2025/> )using the same account for both the synopsis and paper.

If authors do not know their account details or have problems with ConfTool, they should contact: [trd2025papers@gmail.com](mailto:trd2025papers@gmail.com). If the authors have questions about paper contents, scope, acceptance, reviewer comments etc., they should contact Technical Organising Committee. Contact details will be available in the Trondheim webpage (<https://cigrenrccsymposium2025.com/> ).

Files should be converted to Adobe Portable Document Format (pdf) before being uploaded. Files should not contain any scripts or macros.

The maximum size of the pdf file is **10 megabyte**.

# Availability of papers

The Symposium papers will be available for participants via the webpage of CIGRE NRCC 2025 symposium in Trondheim <https://cigrenrccsymposium2025.com/> and after the symposium via [www.e-cigre.org](http://www.e-cigre.org)

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# Appendix B

# Choice of Keywords

Authors have full latitude as regards the choice and number of keywords. As an indication, three to ten words or groups of words are usually sufficient to characterise a technical document.

Each keyword should correspond to a single and precise notion. Certain compound words or groups of words designating one sole notion will constitute keywords.

* Examples:
  + High Voltage, Reactive Power, Power Factor

On the other hand, many compound words which are in fact an association of two independent notions will have to appear as two separate keywords.

* Examples:
  + Interconnection systems -> Interconnection, System
  + Anchor tower -> Anchor, Tower

Words that do not convey precise information, such as: product, matter, agent, effect, process, device, phenomenon, etc. must not be used as keywords.

* Examples:
  + Breaking device -> Breaking
  + Corona effect -> Corona

However, with 'Switching Overvoltage' the keywords will be: 'Switching' and 'Overvoltage'.

For the purpose of indexation, wherever possible, the noun in the singular should be used, rather than the adjective.

* Examples:
  + Guyed tower -> Tower, Guy
  + Inhibited oil -> Oil, Inhibitor

A well-defined chemical substance is a single keyword.

* Example: Sulphur Hexafluoride

However, chemical substance types should be coded with the help of independent keywords.

* Example: Alcaline Chloride -> Chloride, Alcaline

Keywords should always be written in singular, start with a capital letter, and a comma between each word. Authors are advised to use as keywords the terms which appear in the lEC's International Electrotechnical Vocabulary (IEC Publication No 50).

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# Appendix C

Recommendations on the symbols that should be used to represent units

The symbols for units are typed with vertical characters, whatever the kind of characters used in the text. They are written in small letters, except when the name of the unit comes from a name, in which case the first letter of the symbol is a capital one.

* Examples: metre: m; volt: V; hertz: Hz

The products of two units are expressed by combining their symbols with a full stop.

* Example: Newton metre: N.m

The symbols for single units can however be joined together without a full stop when there is no risk of confusion:

* Examples:
  + Watt-hour: Wh
  + Volt ampere: VA
  + kilovolt: kV
  + Megavar: Mvar
* Write:
  + HV or h.v.
  + HVDC or h.v.d.c.
  + AC or a.c.
  + DC or d.c.

The quotient of two units is expressed by putting a stroke between their symbols or by using negative exponents, preferably when there are several symbols in the denominator.

* Examples:
  + metre per second: m/s or m.s–1
  + metre per second squared: m/s2 or m.s–2

The multiples and sub-multiples of SI units are linked to the basic units by standardised symbols

* Examples:
  + T for Tera (1012)
  + k for kilo (103)
  + n for nano (10–9)

The prefix should not be separated from the name of the unit either by a space or any typographical sign.

* Thus, one should write:
  + GW: 109 watts
  + mA: 10–3 amperes
  + MHz: 106 hertz
  + µF: 10–6 farads
  + kV: 103 volts
  + ns: 10–9 seconds
  + cm: 10–2 metres

Symbols are written without a full stop (except when the full stop is a punctuation mark at the end of a sentence which finishes with a symbol) and must not bear the indication that they are plural because 's’ stands for ‘second'.

* Examples:
  + 100 kilometres: 100 km
  + 1 metre per second: 1 m/s
  + 1 lumen second: 1 lm.s

Symbols with decimal figures should appear at the right of the whole number, which indicates the numerical value:

* One should write: 24.5 m, 25.4 °C
* One should not write: 24 m,5 – 25°,4C nor °C25,4

Symbols for units should not be used after a number written out in full.

* One should write:
  + Five kilometres
  + 5 kilometres
  + 5 km
* One should not write: five km.

Generally speaking, it is not advisable to use a symbol for a unit in a text without it being associated with a numerical value written in figures.

* One should write: 'Length is expressed in metres'
* One should not write: ‘Length is expressed in m'

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# Appendix D

CIGRE copyright provisions

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